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EC93-106-A Nebraska Grain Sorghum Hybrid Tests 1993

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NEBRASKA GRAIN SORGHUM HYBRID TESTS 1993

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EXTENSION CIRCULAR 93-106

NEBRASKA GRAIN SORGHUM HYBRID TESTS

January 1994

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ACKNOWLEDGMENTS

This circular is a progress report of grain sorghum trials conducted to obtain yield and other information for some of the hybrids being marketed. The 1993 season was the 36th year that private hybrids were included in these trials. Seed producers supported tests through fee payments.

Cooperating were the Agronomy Department and the South Central, West Central and Panhandle Research and Extension Centers. Acknowledgment is made to Extension Agents and others who assisted in these tests. Special acknowledgment is made to farmers who furnished land for the trials.

Conduct of experiments and publication of results is a joint effort of the Agricultural Research Division and the Cooperative Extension Service. Statistical calcuations were performed by the Biometrics and Information Systems Center at UN-L.

We want to acknowledge the State Climate Program at the University of Nebraska-Lincoln for providing the climate data used in this report. The reports of temperature and rainfall conditions at the various locations are found on pages 31.

We also wish to acknowledge the Nebraska Agricultural Statistics Service for data on crop acreages. Their data is included in the introduction on page 5.

We want to thank the people who provided technical support for this project, namely John A. Eis, Patrick Tenopir, George Hoffmeister, Don Thrailkill, Tom O'Hare, Ray Brantlinger, Glen Frickel, Robert Skates and Mark Swanson.

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METRIC EQUIVALENTS

1 centimeter = 0.394 inches	cm = inches x 2.54
1 hectare = 2.471 acres	ha = acres x 0.405
1 kilogram = 2.205 pounds	kg = pounds x 0.454
1 hectoliter = 2.838 bushels	hl = bushels x 0.352

Kilogram/hectoliter = lb/bu x 1.287
Kilograms/hectare = bu/A x 62.78 (56# bu)

NEBRASKA GRAIN SORGHUM HYBRID TESTS
1993

Recent grain sorghum acreage and yields for Nebraska were as follows:

	1986	1987	1988	1989	1990	1991	1992	1993
Yield bu/A	89.0	90.0	76.0	62.0	77.0	65.0	82.0	64.0
Acres (000)	1,570	1,220	1,360	1,650	1,400	1,250	1,500	1,250

On June 6, planting had progressed to 67% (about one week behind normal). Unseasonably cool and wet conditions did not provide optimum conditions for crop emergence and growth with temperatures averaging from six degrees below normal in the west to eleven degrees below normal in the east. On the week before June 27, severe weather with high winds, excessive rainfall and hail caused some damage. Many low-lying fields were still standing in water and may not be planted. Sorghum conditions were rated at 4% poor, 20% fair, 73% good, and 3% excellent. July rains caused local flooding, with major flooding in the southeast, and winds up to 100 miles per hour on July 8 in central and eastern Nebraska reduced yields and acres to be harvested. By August 8, crop development was about two weeks behind normal. Temperatures averaged seven to eleven degrees below normals. On Sept. 5, sorghum conditions were rated at 10% poor, 46% fair, 40% good, and 4% excellent. Crop was turning color with 26% colored to date. Concerns remained about late heading plants and their ability to mature before the first killing frost. Temperatures averaged about five to seven degrees below normal across the State. Crop maturity was about a week and a half behind normal. By mid October, harvest progressed to 9% complete (over three weeks behind the average of 58%). By Nov. 14, harvest made excellent progress and was about 93% complete which compared to five year average of 94%.

PROCEDURE

Locations of trials are shown on the map (page 9). Names of cooperators are shown in Table A. Entrants and entries are shown in Tables B and C, respectively.

Seed for testing was furnished by the entrant. Seeding rates varied with location as shown in Table D. Seeding was accomplished with cone, belt, or air units mounted on commonly used row planters. Two-row plots, 20 to 30 feet long were used.

Data on one-half bloom were obtained by visiting plots on alternate days during the flowering period. Where included, grain moisture determinations were made at harvest at a time when differences between entries were relatively high. This gives an indication of relative grain drying rates.

Plant height and head exsertion readings were made at harvest. Lodging readings were taken at harvest. Reported yields are based on 56 pounds per bushel and 14 percent grain moisture.

Maturity of a hybrid is an important consideration in its adaptation to a given location. Entries are listed in data tables in order of decreasing yields. Maturity of a hybrid is listed as plant bloom days or days from planting to half bloom. Variations do occur in maturity among trials and over years data. The maturity of a hybrid is an important consideration in its adaptation to a given location. In analyzing yield evaluations, hybrids should be compared with those having similar maturities.

Variations in soil fertility, moisture conditions and other factors are found in each test area. This makes it impossible to measure yielding ability of hybrids with absolute accuracy. For this reason, small yield differences have little meaning. A statistical measure of differences required for significance

is given in each table. These differences were computed at the 5 percent and 25 percent levels of significance. At the 5 percent level a difference of that magnitude would be expected once in twenty trials through chance alone. At the 25 percent level, a difference as large or larger would be expected by chance alone in one of four trials.

RESULTS

The average performance of all entries at each 1993 test location is shown in Table D. All tests were machine harvested this year. The maturity yield-correlation (r value) is an indication of the relationship between maturity (as measured by days from planting to bloom) and grain yield.

The average performance of hybrids included in trials over a five-year period is shown in Table E. This data indicates the effect of seasonal growing conditions on the characters measured. Stalk lodging data are included only for experiments where differentials among hybrids were observed.

Southeast (Pages 14 - 17)

Forty seven entries were planted at two locations. Lancaster county yields averaged 78 bu/a dryland for all entries. Very cool temperatures and wet field conditions during the growing season caused loss of half of the plot due to excessive rainfall. Lodging was not a problem this year. The farmer entries were: DK-40Y @ 72 bu/a and DK-41Y @ 78 bu/acre. Saline county with forty seven entries had a 114 bu/a average. Farmer entries were: NC+6B12 @ 117 bu/a and AgriPro 686 @ 134 bu/a. Flooding washed out one replication of four in this test. Excessive moisture, cool temperatures and lack of high temperatures caused delayed maturity and reduced yields.

South Central (Pages 18 - 21)

The Clay County irrigated test had 46 entries with a 123 bu/acre average. Fillmore county test plot was abandoned due to very poor emergence, variable plant development, standing water, high weed pressure, frequent rains and cool temperatures.

Southwest (Pages 22 - 25)

Red Willow and Hayes County plots were planted in wheat stubble from the 1992 harvest. Both tests had 32 entries. Red Willow County had an average yield of 104 bu/acre. The farmer entries were Pioneer 8446 @ 102 bu/a and Pioneer 8601 @ 111 bu/a. Hayes County had an average yield of 65 bu/acre. Farmer entries were DeKalb 394 @ 40 bu/a and Pioneer 8679 @ 70 bu/a. High winds on July 8 reduced stand significantly. Hail in the first week of August caused and estimated 40% yield loss.

West Central (Pages 26 - 27)

These trials were seeded into wheat stubble from 1992 crop. There were 18 entries tested at each of the two locations. Yields averaged 83 bu/acre at Lincoln county. Perkins county yield average of 31 bu/acre. The farmer entries in Perkins County were: Pioneer 8699 @ 58 bu/a and Pioneer 8771 @ 58 bu/acre. The Perkins County plot did not fully mature before frost.

West (Pages 28 - 29)

Six entries were tested at two locations, both in Cheyenne County. One test was an ecofallow and the other was black fallow. Black fallow had a 20 month fallow following wheat while ecofallow had eight months following wheat. Black fallow average of all entries of 8 bu/a. The farmer entry was Dekalb Plant Gen DK-18 @ 27 bu/a. Ecofallow average of all entries of 3 bu/a. The farmer entry was DK-18 @ 19 bu/a. A very cool season with plenty of moisture, delayed maturity. Killing frost Sept. 13.

West Irrigated (Page 30)

Three entries were tested in Scotts Bluff county. Average of entries was 21 bu/acre. The farmer entry was DK-18 @ 44 bu/acre. Heat units were much below normal, so development was slowed. Frost occurred before sorghum matured which reduced test weight and yields.

Cultural Practices

Lancaster (dryland): Crop history: 1991 corn, 1992 corn. Mulch field cultivated. Preplant 120 lbs anhydrous ammonia was applied. Herbicide: Bicep + Buctril. No insecticide was used. Soil test: pH = 5.9, OM = 4.4%, P = 138, K = 733. There was 75 lb/a of residual N in this plot. Cultivated once and hand hoed.

Saline (dryland): Crop history: 1992 milo. Tillage program was one light discing. Liquid nitrogen was incorporated at 100 lbs per acre. Herbicide: Dual, Ramrod + Atrazine. There was 97 lbs/a of residual N in this plot. No insecticide treatment was needed. Weed control was very good. Hand hoed.

Clay (irrigated): Crop history: 1992-soybeans. Ridge plant. Fertilizer: 80 lbs Nitrogen. Chemical used: Ramrod-Atrazine 6.25 lbs/acre. No insecticide used.

Fillmore (dryland): Plot was abandoned due to poor emergence, variable plant develoment, standing water, frequent rains and cool temperatures.

Red Willow (ecofallow): Previous years, fallow-1991, wheat-1992. Preplant: 80 lbs Nitrogen and 20 lbs P, 0.5 lbs Zinc. At planting time: 11.1 lbs N + 11.1 lbs P + 2.6 lbs K + 2.6 lbs S + 0.21 lb Zinc. Herbicides: Fall '92 - 24 oz Roundup RT + 2.5 qt Atrazine + .75 lb 2,4-D LVE + X-90 + Ammonium Sulfate. Spring - Roundup (16 oz) + Atrazine (1 qt) + Dual (2 pt) preplant. All seed which was not treated with Screen or Concep III by the supplier was treated with Concep III at the West Central R/EC prior to planting. Lorsban 15G (8 oz/1000 ft of row) was applied with planter.

Hayes (ecofallow): No-tilled. Previous crops: 1991-fallow, 1992-wheat. Fall of 1992 - 24 oz Roundup RT + 2.5 qt Atrazine + .75 lb 2.4-D LV. April 28 - 40 lb N with herbicide: 2.25 qt Bladex + 0.75 lb Atrazine + 1 pt Cyclone + 0.56 lb 2,4-D LVE. Six gallons 10-34-0 were applied as starter. Lorsban 15G was applied with planter 8 oz/1000 ft of row.

Lincoln (ecofallow): Crop history: 1991-fallow, 1992-winter wheat. Herbicides: Atrazine + Paraquat were used on stubble after wheat harvest and Landmaster preplant. Fertilizer: 60 lbs Nitrogen preplant. No insecticide was applied.

Perkins (ecofallow): No-tilled. Crop history: 1991 millet, 1992-winter wheat. Herbicide: Fall treatment 18 oz Roundup + 18 oz 2,4-D. March 20, 1993 24 oz Roundup RT + 15 oz 2,4-D amine + 1.25 lb Atrazine. At planting applied 67 lbs nitrogen as starter fertilizer. Lorsban 15 G insecticide was applied in furrow with planter at 8 oz/1000 ft of row.

Cheyenne (black fallow): Crop history: 1991-Wheat, 1992-Fallow. Herbicides: 0.5 lb of Atrazine. Fertilizer: 7 lbs N and 24 lbs P at planting time. No insecticide was used.

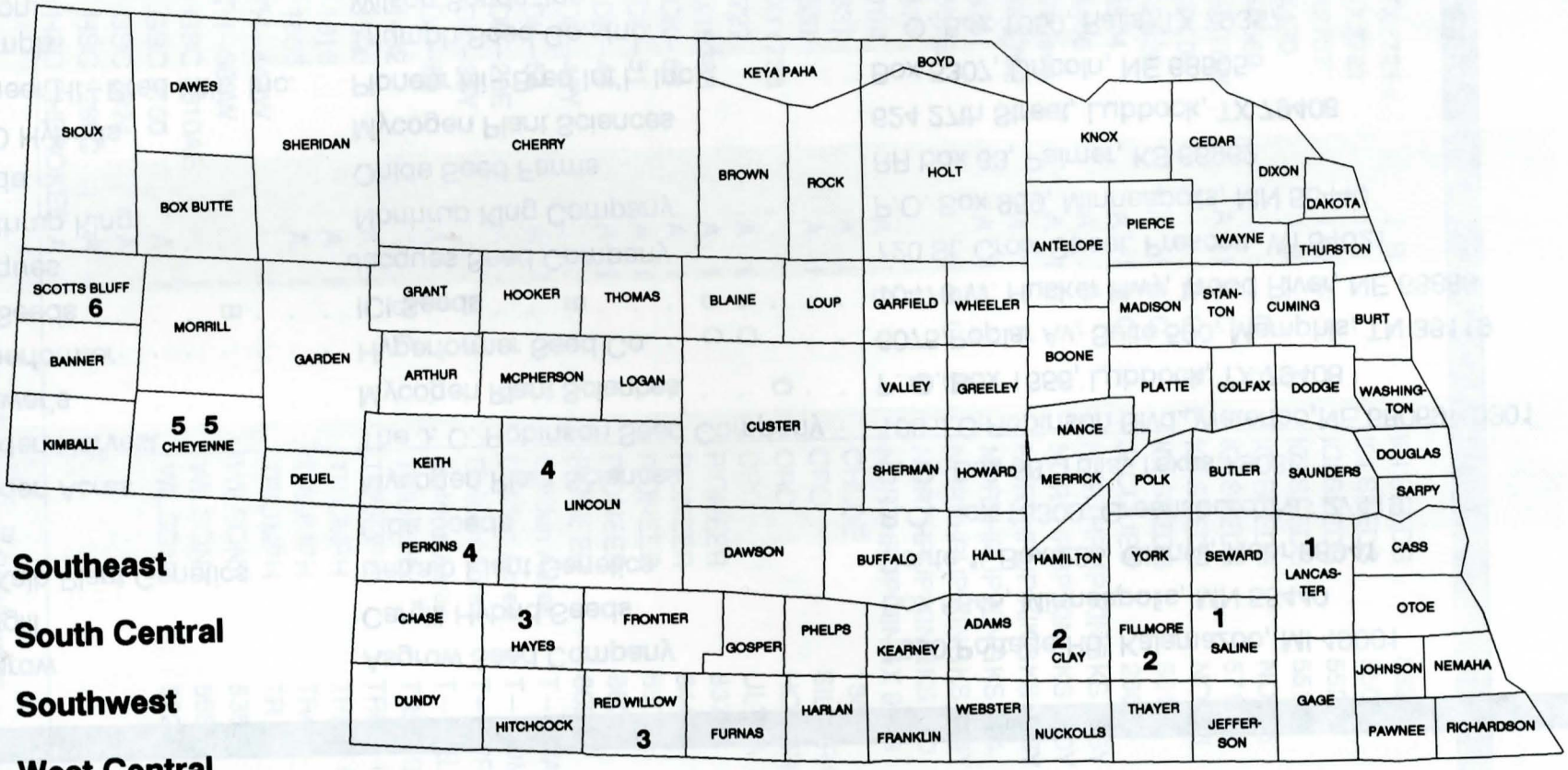
Cheyenne (ecofallow): 1991-Fallow, 1992-Oats. Herbicides: Atrazine 0.5 lbs. Fertilizer: At planting 7 lbs N and 24 lbs P. Sidedress 50 lbs Nitrogen. No insecticide treatment was needed.

Scotts Bluff (furrow irrigated): Previous crop was potatoes. Fertilizer: 150 lbs Nitrogen was sidedressed as anhydrous in early July. 7 lbs N + 24 lbs P as starter. No herbicide or insecticide was used. Weeds were hand hoed.

Table A. Location and cooperators. 1993 Nebraska Grain Sorghum Performance Tests.

Location	Soil Type/Herbicide	Cooperator
Southeast		
Lancaster (dryland)	Crete–Butler Silt Loam Bicep + Buctril	Bruce Tiedeman Hickman
Saline (dryland)	Crete Silt Loam Dual + Ramrod + Atrazine	Marvin Synovec DeWitt
South Central		
Clay (irrigated)	Hastings Silt Loam Ramrod + Atrazine	South Central REC Clay Center
Fillmore (dryland)	Crete–Butler Ramrod + Atrazine	Mike O'Brian Grafton
Southwest		
Red Willow (ecofallow)	Holdrege & Keith Silt Loam Roundup + Atrazine + Dual	Ken Winters Indianola
Hayes (ecofallow)	Kuma Silt Loam Bladex + Atrazine	Dennis Riener Palisade
West Central		
Lincoln (ecofallow)	Hall Silt Loam Atrazine+Landmaster+Paraquat	West Central REC North Platte
Perkins (ecofallow)	Keith Silt Loam Roundup + Atrazine + 2,4–D	Tom Kraus Madrid
West		
Cheyenne(black fallow)	Duroc Loam Atrazine	High Plains Ag. Lab. Sidney
Cheyenne (ecofallow)	Rosebud Loam Atrazine	High Plains Ag. Lab. Sidney
West		
Scottsbluff (irrigated)	Tripp Very Fine Sandy Loam No Herbicide used	Panhandle Res. & Ext. Center Scotts Bluff

Locations of 1993 Sorghum Tests



1 Southeast

2 South Central

3 Southwest

4 West Central

5 West

6 West Irrigated

Table B. Entrants. Nebraska grain sorghum performance tests. 1993

Brand	Entrant	Address
Asgrow	Asgrow Seed Company	7000 Portage Rd, Kalamazoo, MI 49001
Cargill	Cargill Hybrid Seeds	Box 5645, Minneapolis, MN 55440
DeKalb Plant Genetics	DeKalb Plant Genetics	Route 1, Box 225, Glenvil, Nebr 68941
Ciba	Ciba Seeds	P.O. Box 18300, Greensboro, NC 27419
Golden Acres	Mycogen Plant Sciences	P. O. Box 68, Tulia, Texas 79088
Golden Harvest	The J. C. Robinson Seed Company	100 J.C.Robinson Blvd.,Waterloo,NE 68069–0301
Grower's	Mycogen Plant Sciences	P. O. Box 1656, Lubbock, TX 79408
Hyperformer	Hyperformer Seed Co.	6075 Poplar Av, Suite 500, Memphis, TN 38119
ICI Seeds	ICI Seeds	10476 W. Husker Hwy, Wood River, NE 68883
Jacques	Jacques Seed Company	720 St. Croix Street, Prescott, WI 54021
Northrup King	Northrup King Company	P.O. Box 959, Minneapolis, MN 55440
Ohlde	Ohlde Seed Farms	RR box 63, Palmer, KS 66962
ORO Hybrids	Mycogen Plant Sciences	624 27th Street, Lubbock, TX 79408
Pioneer Hi–Bred Int'l., Inc.	Pioneer Hi–Bred Int'l., Inc.	Box 5307, Lincoln, NE 68505
Triumph	Triumph Seed Co., Inc.	P. O. Box 1050, Ralls, TX 79357
Wilson	Wilson Seeds, Inc.	P. O. Box 391, Harlan, Iowa 51537

Table C. Grain Sorghum entries and zones entered. 1993

Brand	Hybrid	Zone *						
-----	90M351 X TX2721		I	B				
-----	90M524 X TX2721		I	B				
-----	N122A X TX2737		I	B				
-----	N122A X TX430		I	B				
-----	N123A X 840089					D		E
-----	MARTIN	A	I	B	C			
-----	NB505			B	C		D	E
-----	RS626	A	I	B	C			
ASGROW	A504	A	I	B	C			
ASGROW	A406	A		B				
ASGROW	Seneca	A	I	B				
ASGROW	XP5702	A						
CARGILL	575	A	I					
CARGILL	607E		I	B	C		D	
CARGILL	577						D	
CARGILL	797	A	I	B				
CARGILL	837	A	I					
CARGILL	857	A	I					
CARGILL	X11733						D	
CARGILL	727	A	I	B	C			
CARGILL	X19383	A	I	B	C			
DEKALB Plant Gen	DK-56	A	I					
DEKALB Plant Gen	DK-51	A	I					
DEKALB Plant Gen	DK-48	A	I					
DEKALB Plant Gen	DK-40Y			B				
DEKALB Plant Gen	DK-54	A	I					
DEKALB Plant Gen	DK-28E						D	E
DEKALB Plant Gen	DK-38Y			B	C			
DEKALB Plant Gen	DK-58	A						
CIBA	1482			B	C			
CIBA	1506	A	I					
CIBA	1616	A	I					
CIBA	1655	A	I					
GOLDEN HARVEST	H-444W		I					
GOLDEN HARVEST	H-388W		I	B				
Growers	GSC 1310AE		I					
Growers	GSC 3150	A	I					
Growers	GSC 3624	A						
HYPERFORMER	HSC 1289C	A	I					
HYPERFORMER	HSC CHEROKEE	A	I					

Brand	Hybrid	Zone *						
ICI SEEDS	5323	A						
ICI SEEDS	5503	A	I					
ICI SEEDS	5522Y	A	I					
ICI SEEDS	5514Y	A						
ICI SEEDS	NO536	A	I					
ICI SEEDS	5712			B				
ICI SEEDS	NO643			B	C			
ICI SEEDS	5616				C			
JACQUES	266E				C			
NORTHRUP KING	KS 555Y		I	B	C			
NORTHRUP KING	KS 560Y	A	I	B	C			
NORTHRUP KING	KS 383Y			B	C			
NORTHRUP KING	KS 524		I	B	C			
NORTHRUP KING	KS 714Y	A	I					
NORTHRUP KING	KS 710	A						
NORTHRUP KING	X 9148	A						
OHLDE	136	A	I					
ORO	SILVERADO		I					
ORO	HOMBRE		I					
ORO	ULTRA		I					
PIONEER	8379	A	I					
PIONEER	8446	A	I					
PIONEER	8505	A	I	B				
PIONEER	8601			B				
PIONEER	8699			B				
Golden Acres	T-E HARDY				C			
Golden Acres	T-E OMAHA	A		B				
Golden Acres	T-E PROSPER	A		B				
Golden Acres	T-E ELITE				C			
TRIUMPH	TR50yG			B				
TRIUMPH	TR60-G	A	I					
TRIUMPH	TR65-G		I					
TRIUMPH	TR459		I	B				
TRIUMPH	TR 46			B				
WILSON	535Y	A	I					
WILSON	568E	A						
WILSON	522W	A						

* Zone A = Southeast, Zone I = South Central, Zone B = Southwest
Zone C = West Central, Zone D = West Dryland, Zone E = West Irrigated

Table D. Grain sorghum. Average performance at each test location. 1993

Location	Planted	Harvested	Grain yield bu/A	Planting to bloom days	Plant height inches	Head exertion inches	Bushel weight lb/bu	Maturity yield correlation r[1]
Southeast (47 entries)								
Lancaster	June 1	Nov. 3	78	80	48	8	57.8	−0.41**
Saline	June 1	Nov. 1	114	80	47	5	57.7	−0.52**
Average 2 tests			99	80	47	6	57.8	
South Central (46 entries)								
Clay (Irr.)	May 28	Oct. 28	78	78	50	8	---	0.20 NS
Southwest (32 entries)								
Red Willow (Eco.)	May 25	Nov. 2	104	---	51	---	56.1	---
Hayes (Eco.)	May 25	Nov. 2	65	---	50	---	52.5	---
Average 2 tests			85	---	50	---	54.4	
West Central (18 entries)								
Lincoln (Eco.)	June 3 & 9	Nov. 5	83	74	---	---	50.7	−0.77**
Perkins (Eco.)	May 15	Nov. 3	31	---	48	---	44.9	---
Average 2 tests			57	74	48	---	48.1	
West (6 entries)								
Cheyenne (Black)	June 7	Oct. 27	8	75	39	---	33.3	−0.85*
Cheyenne (Eco.)	June 2	Oct. 27	3	82	40	---	27.4	−0.71*
Average 2 tests			5	77.8	39	---	30.8	
West Irrigated (3 entries)								
Cheyenne	June 11	Oct. 6	21	---	42	---	45.0	---

[1] Correlation of average days to bloom for zone with acre grain yield. Higher r values indicate closer agreement. * significant (5% level). ** highly significant (1% level). Negative values indicate that later flowering was accompanied by lower yield.

Table E. Sorghum performance. Average for common entries over years within tests. Five years. 1989 – 1993.

Test	Year	Grain yield bu/a	Planting to bloom days	Plant height inches	Head exsertion inches	Early–grain moisture %	Stalk lodging %	Test weight lbs/bu
Southeast (7 entries)								
	1989	108	74	48	5	---	20	58.4
	1990	88	81	48	6	16.3	4	60.2
	1991	85	97	38	3	12.0	0.6	60.8
	1992	112	87	48	9	15.7	8	59.5
	1993	91	80	47	6	16.3	0.1	58.2
South Central (13 entries)								
Four Years Only	1990	126	74	49	7	15.5	27	55.6
	1991	121	74	48	5	12.0	---	---
	1992	148	86	50	6	12.5	3	59.5
	1993	122	78	50	8	14.1	---	60.1
Southwest (4 entries)								
	1989	39	76	45	---	---	13	51.0
	1990	60	---	39	---	14.5	1	58.0
	1991	39	---	43	---	12.3	27	57.0
	1992	95	---	49	---	16.0	0	58.9
	1993	62	---	49	---	15.8	0	54.4
West Central (3 entries)								
Four Years Only	1990	27	69	46	---	10.3	34	50.6
	1991	64	82	43	---	12.7	22	54.3
	1992	56	89	---	---	14.0	0	47.1
	1993	60	72	49	---	13.3	0.2	48.8
West (1 entry)								
	1989	18	74	44	---	---	---	43.9
	1990	30	78	39	---	14.0	8	54.4
	1991	31	85	40	---	14.0	---	52.9
	1992	29	88	41	---	18.0	---	47.2
	1993	5	74	42	---	10.0	---	37.9

Southeast Dryland Grain Sorghum Hybrid Tests
Lancaster and Saline Counties – 1993

Brand	Hybrid	Average yield bu/a	Lancaster yield bu/a	Saline yield bu/a	Days to bloom	Plant height inches	Head exsert %	Grain moisture %	Stalk Lodge %	Bushel weight lb/bu	Seeds per pound
ASGROW	XP5702	117 **	90 *	143 *	80	54	8	16	0	58.3	16700
CARGILL	837	115 *	78 *	152 **	81	50	6	17	0	57.5	17800
ASGROW	A504	113 *	86 *	140 *	77	48	8	16	0	59.5	14800
CIBA	1506	112 *	82 *	141 *	78	54	8	16	0	58.9	15400
NORTHRUP KING	X 9148	110 *	85 *	134 *	78	47	6	16	1	58.5	16800
MYCOGEN	GSC 3150	108 *	83 *	132 *	82	48	5	17	0	56.8	16700
CARGILL	797	108 *	91 *	125 *	78	45	5	16	0	58.4	16800
DEKALB Plant Gen	DK–51	108 *	91 *	124 *	79	46	7	16	0	57.6	16200
OHLDE	136	106 *	92 **	119 *	78	48	8	16	0	57.0	17900
CARGILL	727	105 *	75 *	134 *	76	47	7	15	0	58.4	16000
HYPERFORMER	HSC 1289C	104 *	85 *	122 *	77	49	7	15	0	59.3	16400
HYPERFORMER	HSC CHEROKEE	103 *	79 *	127 *	81	49	6	17	0	56.4	18400
CARGILL	575	103 *	84 *	121 *	78	49	7	15	1	59.1	16600
-----	N122A X TX2737	101 *	75 *	127 *	78	48	7	15	0	60.0	18000
CIBA	1616	101 *	84 *	118 *	81	53	7	17	0	56.5	16900
-----	90M351 X TX272	100 *	77 *	123 *	79	48	6	16	0	57.1	17400
NORTHRUP KING	KS 714Y	100 *	80 *	120 *	76	46	6	15	0	60.4	17700
WILSON	522W	100 *	77 *	122 *	77	48	7	16	0	59.0	16000
ASGROW	Seneca	100 *	81 *	118 *	78	44	6	15	0	60.9	17500
DEKALB Plant Gen	DK–56	100 *	68 *	132 *	82	52	7	17	0	56.9	18200
-----	90M524 X TX272	100 *	65 *	135 *	77	46	6	15	0	59.6	17800
CARGILL	X19383	99 *	81 *	117 *	79	43	6	16	0	57.8	15300
ICI SEEDS	5323	99 *	82 *	116 *	81	47	6	17	1	57.7	15800
-----	N122A X TX430	99 *	78 *	120 *	82	47	7	16	0	58.1	17600
DEKALB Plant Gen	DK–48	98 *	87 *	108	79	48	6	17	0	59.5	15900
ASGROW	A406	97 *	81 *	112 *	77	46	7	16	0	59.2	17200
MYCOGEN	T–E OMAHA	97 *	82 *	112 *	78	51	7	17	0	57.8	17100
ICI SEEDS	5503	97 *	66 *	128 *	82	50	6	17	0	56.4	17200

Continued on page 2.

Southeast Dryland Grain Sorghum Hybrid Tests
Lancaster and Saline Counties – 1993. Page 2.

Brand	Hybrid	Average yield bu/a	Lancaster yield bu/a	Saline yield bu/a	Days to bloom	Plant height inches	Head exsert %	Grain moisture %	Stalk Lodge %	Bushel weight lb/bu	Seeds per pound
CIBA	1655	96	83 *	108	84	46	4	19	0	56.2	18100
ICI SEEDS	5514Y	94	76 *	111 *	84	46	7	16	1	56.6	17700
MYCOGEN	GSC 3624	93	78 *	107	78	51	7	15	0	58.9	16100
ICI SEEDS	NO536	93	87 *	99	81	44	6	16	0	59.0	16500
ICI SEEDS	5522Y	92	86 *	98	80	50	7	17	0	57.3	16700
NORTHRUP KING	KS 710	91	81 *	101	79	41	7	16	0	59.7	16300
MYCOGEN	T–E PROSPER	90	78 *	101	78	43	6	15	0	59.1	15100
PIONEER	8505	89	75 *	102	79	47	7	16	0	59.1	17000
PIONEER	8379	88	77 *	98	80	45	6	17	0	59.4	16200
-----	RS626	88	73 *	103	82	45	6	17	0	54.2	17100
NORTHRUP KING	KS 560Y	87	75 *	99	77	42	4	15	0	58.9	17700
DEKALB Plant Gen	DK–54	87	67 *	107	82	53	8	18	1	56.1	17700
CARGILL	857	80	61 *	98	82	47	5	18	0	58.6	19900
DEKALB Plant Gen	DK–58	80	55 *	104	85	52	6	18	0	52.1	19600
PIONEER	8446	78	74 *	82	80	45	7	16	0	57.6	17200
WILSON	568E	77	72 *	81	86	54	7	20	1	53.6	18300
WILSON	535Y	67	65 *	69	84	51	8	19	0	54.5	18800
TRIUMPH	TR60–G	66	70 *	61	84	48	7	17	0	53.1	20300
-----	MARTIN	63	54 *	71	81	46	7	16	1	58.4	17200
AVERAGE ALL ENTRIES		99	78	114	80	47	6	16	0	57.8	17080
DIF. REQ. FOR SIG. 5%		20	NS	41	3	3	2	1	NS	2.2	1830
25%		12	NS	24	2	2	1	1	NS	1.3	1070

** Top yield within a column, * Not different than top yield within a column

Southeast Dryland Grain Sorghum Hybrid Tests 1989 – 1993

BRAND	HYBRID	GRAIN YIELD BU/A	PLANT BLOOM DAYS	PLANT HEIGHT IN	HEAD EXSERT IN	EARLY MOISTUI %	STALK LODGE %	TEST WEIGHT LB/BU	SEEDS PER POUND
		2–YEAR AVERAGE							
ASGROW	A504	122	83	48	9	17	1	59.6	15800
CIBA	1506	122	83	54	9	16	0	59.3	16000
CARGILL	837	116	86	50	7	17	2	57.9	18000
OHLDE	136	116	81	48	9	16	0	58.0	18800
CIBA	1616	114	85	53	7	17	1	57.1	16600
HYPERFORMER	HSC CHEROKEE	113	85	49	7	17	0	58.2	18500
CARGILL	797	113	84	46	7	16	1	58.2	17900
-----	N122A X TX430	112	82	48	7	16	0	59.7	17700
CIBA	1655	111	85	48	6	18	0	58.4	17700
DEKALB Plant Gen	DK–48	109	82	48	7	16	5	60.0	16700
NORTHRUP KING	KS 714Y	109	82	47	7	16	0	60.2	19500
ASGROW	Seneca	108	82	44	8	16	0	61.3	17700
DEKALB Plant Gen	DK–56	108	86	52	9	17	1	58.2	17600
CARGILL	575	107	85	49	8	16	1	58.8	17400
PIONEER	8505	106	81	47	7	16	0	60.1	18000
HYPERFORMER	HSC 1289C	106	84	50	9	16	0	58.7	17100
NORTHRUP KING	KS 560Y	103	80	42	6	15	0	59.9	19500
MYCOGEN	T–E OMAHA	101	84	51	8	17	4	58.0	17500
PIONEER	8379	101	84	46	7	17	1	59.9	16200
-----	RS626	101	83	47	7	17	7	56.6	16400
TRIUMPH	TR60–G	98	85	48	7	16	0	56.7	19200
WILSON	535Y	96	86	52	10	18	1	57.1	17200
MYCOGEN	T–E PROSPER	95	84	46	7	15	2	58.9	16200
CARGILL	857	86	87	48	6	17	0	58.1	21400
-----	MARTIN	69	83	46	9	16	15	59.6	17000
AVERAGE ALL ENTRIES		106	83	48	7	16	2	58.7	17657
DIF. REQ. FOR SIG.	5%	9.4	NS	1.1	0.6	0.8	NS	NS	1097
	25%	5.4	NS	0.6	0.4	0.4	NS	NS	636
		3–YEAR AVERAGE							
CIBA	1506	117	88	51	7	15	0	60.0	12600
OHLDE	136	109	87	44	7	14	0	58.8	15000
CARGILL	837	109	90	47	6	15	1	58.9	14300
ASGROW	A504	109	89	45	7	15	0	60.1	12700
CIBA	1616	107	89	49	6	15	0	58.1	13300
-----	N122A X TX430	106	87	45	5	14	0	60.1	14200
DEKALB Plant Gen	DK–48	105	87	45	6	15	3	60.4	13900
DEKALB Plant Gen	DK–56	103	91	49	7	15	1	59.1	14300
ASGROW	Seneca	102	86	41	6	14	0	61.6	14300

Continued on Page 2.

Southeast Dryland Grain Sorghum Hybrid Tests 1989 – 1993. Page 2

BRAND	HYBRID	GRAIN YIELD BU/A	PLANT BLOOM DAYS	PLANT HEIGHT IN	HEAD EXSERT IN	EARLY MOISTUI %	STALK LODGE %	TEST WEIGHT LB/BU	SEEDS PER POUND
		3–YEAR AVERAGE (Continued)							
NORTHRUP KING	KS 714Y	102	87	44	6	14	0	60.8	15700
CARGILL	575	101	89	46	7	15	1	59.6	13900
PIONEER	8379	101	88	43	5	15	0	60.5	13000
TRIUMPH	TR60–G	98	88	45	6	14	0	58.3	15200
WILSON	535Y	94	90	48	7	16	0	58.5	13300
-----	RS626	92	86	44	6	15	6	57.5	13500
-----	MARTIN	63	88	42	7	14	10	59.6	14000
AVERAGE ALL ENTRIES		101	88	46	6	15	2	59.5	13946
DIF. REQ. FOR SIG.	5%	7.2	NS	0.8	0.6	NS	NS	0.9	NS
	25%	4.2	NS	0.5	0.3	0.3	NS	0.5	468
		4–YEAR AVERAGE							
CIBA	1616	108	88	50	5	16	1	58.6	14300
ASGROW	A504	106	87	46	7	16	1	60.3	14100
-----	N122A X TX430	104	85	46	6	15	1	60.3	15700
DEKALB Plant Gen	DK–56	104	89	50	7	16	2	59.7	15700
CARGILL	575	100	87	47	6	15	1	59.9	15600
DEKALB Plant Gen	DK–48	99	86	46	6	15	5	60.4	15700
NORTHRUP KING	KS 714Y	99	85	45	6	15	0	60.8	17600
PIONEER	8379	99	86	43	5	16	1	60.7	14200
-----	RS626	90	85	45	6	15	7	57.8	15200
-----	MARTIN	63	86	43	7	14	9	59.7	15400
AVERAGE ALL ENTRIES		97	86	45.9	5.9	15.2	3	59.8	15340
DIF. REQ. FOR SIG.	5%	4.3	NS	0.6	0.4	0.5	NS	0.6	648
	25%	2.5	0.8	0.4	0.2	0.3	1.7	0.3	374
		5–YEAR AVERAGE							
CIBA	1616	113	85	51	5	16	9	58.3	14300
PIONEER	8379	106	83	44	5	16	1	60.4	14200
DEKALB Plant Gen	DK–48	105	83	46	5	15	6	60.2	15700
NORTHRUP KING	KS 714Y	102	83	45	6	15	4	60.4	17600
CARGILL	575	97	84	47	6	15	5	59.5	15600
-----	RS626	91	82	45	5	15	10	57.6	15200
-----	MARTIN	65	84	43	7	14	12	59.4	15400
AVERAGE ALL ENTRIES		97	83	45.8	6	15	7	59.4	15414
DIF. REQ. FOR SIG.	5%	5.2	NS	0.9	0.4	NS	NS	0.5	670
	25%	3.0	0.6	0.5	0.2	0.3	NS	0.3	383

South Central Irrigated Sorghum Hybrid Test
Clay County – 1993

Brand	Hybrid	Average yield bu/a	Days to bloom	Plant height inches	Head exsert %	Grain moisture %	Bushel weight lb/bu	Seeds per pound
DEKALB Plant Gen	DK–54	142	80	57	10	15	59.8	15600
CIBA	1655	140	79	50	6	15	61.0	17100
DEKALB Plant Gen	DK–56	138	81	55	11	14	60.4	17300
ASGROW	A504	137	77	51	9	14	59.8	15800
GOLDEN HARVEST	H–444W	136	78	56	9	14	60.6	16300
DEKALB Plant Gen	DK–51	136	79	50	8	14	59.4	18300
CIBA	1616	135	79	53	8	14	59.8	16900
HYPERFORMER	HSC 1289C	134	79	53	9	14	59.8	16700
MYCOGEN	GSC 3150	131	81	52	6	14	59.8	18000
-----	90M524 X TX272	129	77	47	7	14	59.0	19100
TRIUMPH	TR60–G	128	76	50	8	14	60.2	19200
ICI SEEDS	NO536	127	80	48	8	14	60.6	16000
-----	N122A X TX2737	127	76	51	10	14	60.7	18900
CARGILL	X19383	127	80	50	8	14	59.3	15600
PIONEER	8505	127	76	46	6	14	60.5	16900
NORTHRUP KING	KS 524	126	78	46	7	14	58.9	18700
CIBA	1506	126	79	59	11	14	59.8	15200
CARGILL	837	126	80	52	9	14	59.9	18400
OHLDE	136	126	80	50	11	14	59.4	17400
ASGROW	Seneca	125	78	45	8	14	61.3	19500
TRIUMPH	TR65–G	125	79	49	8	14	60.1	18800
MYCOGEN	GSC 1310AE	124	78	47	9	14	60.2	16200
NORTHRUP KING	KS 555Y	124	75	49	6	14	60.8	17800
DEKALB Plant Gen	DK–48	123	79	51	9	14	60.5	17100
WILSON	535Y	123	81	55	12	14	60.0	15800
ICI SEEDS	5522Y	123	80	54	10	14	59.9	16500

Continued on page 2.

South Central Irrigated Sorghum Hybrid Test
Clay County – 1993. Page 2

Brand	Hybrid	Average yield bu/a	Days to bloom	Plant height inches	Head exsert %	Grain moisture %	Bushel weight lb/bu	Seeds per pound
CARGILL	727	123	78	49	9	13	58.9	18100
ICI SEEDS	5503	122	80	50	8	15	59.9	18500
MYCOGEN	ORO HOMBRE	121	80	47	4	14	58.0	18600
HYPERFORMER	HSC CHEROKEE	121	79	50	6	15	60.3	17600
PIONEER	8379	120	78	48	8	14	60.8	15500
PIONEER	8446	120	78	46	7	14	60.3	17600
GOLDEN HARVEST	H–388W	119	76	48	9	14	59.2	17600
-----	N122A X TX430	119	76	46	6	14	59.8	18800
CARGILL	857	119	81	48	7	14	60.2	18200
CARGILL	797	118	79	47	7	14	58.5	18100
TRIUMPH	TR459	118	77	45	10	14	59.8	20100
NORTHRUP KING	KS 714Y	118	76	48	8	14	60.5	18200
MYCOGEN	ORO ULTRA	115	81	48	8	14	59.1	16500
MYCOGEN	ORO SILVERADC	115	80	56	10	14	59.4	17100
NORTHRUP KING	KS 560Y	115	75	43	5	14	59.7	20100
-----	90M351 X TX272	113	79	50	7	14	58.2	18100
-----	RS626	111	77	49	7	14	57.9	17000
CARGILL	575	108	78	54	10	14	59.6	16300
CARGILL	607E	106	76	43	8	14	59.6	19600
-----	MARTIN	91	78	48	9	14	60.1	18900
AVERAGE ALL ENTRIES		123	78	50	8	14	59.8	17610
DIF. REQ. FOR SIG. 5%		10	2	2	2	1	1.1	2010
25%		6	1	1	1	1	0.6	1160

South Central Grain Sorghum Hybrid Tests 1990 – 1993

BRAND	HYBRID	GRAIN YIELD BU/A	PLANT BLOOM DAYS	PLANT HEIGHT INCHES	HEAD EXSERT INCHES	EARLY MOISTUI %	STALK LODGE %	TEST WEIGHT LB/BU	SEEDS PER POUND
		2–YEAR AVERAGE							
CIBA	1655	150	83	51	5	14	1	60.7	17500
GOLDEN HARVEST	H–444W	150	83	56	7	14	5	60.4	16600
ASGROW	A504	149	83	51	9	14	1	59.6	16300
CIBA	1616	146	83	54	7	13	1	58.7	16700
DEKALB Plant Gen	DK–56	145	84	55	10	13	3	60.0	17300
HYPERFORMER	HSC 1289C	142	85	53	8	13	3	59.1	17100
TRIUMPH	TR65–G	141	83	50	6	14	0	59.2	19200
NORTHRUP KING	KS 714Y	140	83	50	7	14	3	60.1	19100
HYPERFORMER	HSC CHEROKE	140	84	50	6	14	0	59.5	18200
PIONEER	8379	139	83	48	6	13	0	60.7	16000
NORTHRUP KING	KS 524	139	83	47	6	13	3	58.6	18900
NORTHRUP KING	KS 555Y	139	79	50	6	14	3	60.9	18000
CARGILL	837	138	85	52	7	13	3	59.4	18300
PIONEER	8446	138	82	46	7	13	0	59.7	17900
PIONEER	8505	138	79	47	6	13	1	60.4	17500
WILSON	535Y	138	83	54	10	13	1	59.8	15500
GOLDEN HARVEST	H–388W	136	81	48	8	14	0	59.3	18000
MYCOGEN	ORO HOMBRE	135	85	47	4	13	0	56.3	18900
CIBA	1506	134	82	58	10	13	6	59.1	15800
-----	N122A X TX430	133	79	47	5	14	1	59.9	18100
ASGROW	Seneca	133	83	45	7	13	0	60.9	19500
CARGILL	857	130	87	48	5	13	0	59.4	19700
CARGILL	575	130	85	52	8	13	4	59.3	17100
CARGILL	797	129	85	47	6	14	0	57.9	18500
NORTHRUP KING	KS 560Y	129	79	43	5	14	0	59.8	20800
-----	RS626	120	80	49	6	13	5	57.7	17100
CARGILL	607E	117	79	44	7	14	0	59.2	19800
-----	MARTIN	96	83	49	8	13	14	60.0	18400
AVERAGE ALL ENTRIES		135	82	49	7	13	2	59.5	17893
DIF. REQ. FOR SIG.	5%	4.4	1.2	0.8	0.6	NS	NS	0.4	444
	25%	2.5	0.7	0.6	0.3	NS	NS	0.2	259
		3–YEAR AVERAGE							
CIBA	1655	142	79	49	5	13	1	60.7	17500
GOLDEN HARVEST	H–444W	142	81	54	6	13	5	60.4	16600
ASGROW	A504	140	81	50	8	13	1	59.6	16300
CIBA	1616	138	81	54	6	13	1	58.7	16700
DEKALB Plant Gen	DK–56	138	83	54	9	13	3	60.0	17300

Continued on page 2.

South Central Grain Sorghum Hybrid Tests 1990 – 1993. Page 2

BRAND	HYBRID	GRAIN YIELD BU/A	PLANT BLOOM DAYS	PLANT HEIGHT INCHES	HEAD EXSERT INCHES	EARLY MOISTUI %	STALK LODGE %	TEST WEIGHT LB/BU	SEEDS PER POUND
		3–YEAR AVERAGE (Continued)							
CARGILL	837	138	82	52	6	13	3	59.4	18300
NORTHRUP KING	KS 714Y	137	81	49	7	13	3	60.1	19100
NORTHRUP KING	KS 555Y	136	76	49	6	13	3	60.9	18000
WILSON	535Y	136	80	53	9	13	1	59.8	15500
PIONEER	8379	135	80	47	5	13	0	60.7	16000
-----	N122A X TX430	134	77	48	5	13	1	59.9	18100
MYCOGEN	ORO HOMBRE	134	82	47	4	13	0	56.3	18900
ASGROW	Seneca	132	79	44	7	13	0	60.9	19500
CIBA	1506	132	80	57	9	13	6	59.1	15800
CARGILL	575	125	82	51	7	13	4	59.3	17100
CARGILL	607E	118	77	44	6	13	0	59.2	19800
-----	RS626	117	76	48	6	13	5	57.7	17100
-----	MARTIN	90	79	48	8	13	14	60.0	18400
AVERAGE ALL ENTRIES		131	80	50	6	13	3	59.6	17528
DIF. REQ. FOR SIG.	5%	4.2	1.1	0.8	0.6	NS	NS	0.4	353
	25%	2.5	0.6	0.5	0.3	0.1	NS	0.2	203
		4–YEAR AVERAGE							
CIBA	1616	140	80	54	6	14	21	56.8	16700
DEKALB Plant Gen	DK–56	140	81	54	9	14	26	58.6	17300
GOLDEN HARVEST	H–444W	140	80	53	6	14	11	58.9	16600
CIBA	1655	139	78	49	5	14	14	59.4	17500
ASGROW	A504	137	80	50	8	14	21	58.4	16300
NORTHRUP KING	KS 714Y	136	79	49	7	14	4	58.8	19100
PIONEER	8379	134	79	47	5	14	2	59.3	16000
NORTHRUP KING	KS 555Y	134	74	50	6	14	23	59.6	18000
-----	N122A X TX430	131	76	48	5	13	5	58.6	18100
CARGILL	575	125	81	51	7	14	7	58.1	17100
CARGILL	607E	118	75	44	6	14	0	57.6	19800
-----	RS626	116	74	48	6	13	38	56.5	17100
-----	MARTIN	88	78	48	8	13	25	58.4	18400
AVERAGE ALL ENTRIES		129	78	49	6	14	15	58.4	17512
DIF. REQ. FOR SIG.	5%	3.6	0.9	0.7	0.4	NS	NS	0.2	335
	25%	2.1	0.5	0.4	0.2	NS	NS	0.1	190

Southwest Ecofallow Grain Sorghum Hybrid Tests
Red Willow and Hayes Counties – 1993

Brand	Hybrid	Average yield bu/a	Red Willo yield bu/a	Hayes yield bu/a	Plant height inches	Grain moistur %	Stalk Lodge %	Bushel weight lb/bu
ICI SEEDS	NO643	111 **	128 **	93 **	55	15	1	56.1
-----	N122A X TX430	106 *	123 *	89 *	50	15	0	55.7
PIONEER	8699	101 *	121	81 *	51	15	0	55.3
NORTHRUP KING	KS 555Y	99 *	120	77 *	52	16	0	55.9
-----	90M524 X TX272	99 *	117	80 *	50	16	0	56.1
PIONEER	8505	97 *	116	77 *	50	16	0	56.2
NORTHRUP KING	KS 560Y	94	108	79 *	46	16	0	55.6
ASGROW	Seneca	94	110	77 *	47	16	0	56.3
-----	N122A X TX2737	94	108	80 *	53	16	1	55.6
CARGILL	X19383	93	119	67	48	16	0	54.2
ASGROW	A504	93	116	70	52	16	0	53.3
PIONEER	8601	92	111	72	51	16	1	55.7
CARGILL	727	90	104	76	51	16	0	52.8
TRIUMPH	TR50yG	89	112	65	47	15	0	55.3
NORTHRUP KING	KS 524	88	106	69	48	16	0	53.7
ICI SEEDS	5712	87	102	72	49	16	0	55.2
NORTHRUP KING	KS 383Y	87	105	68	45	15	0	54.4
GOLDEN HARVEST	H–388W	86	107	65	49	16	0	54.6
TRIUMPH	TR459	85	105	65	47	16	0	56.0
CARGILL	607E	85	102	67	46	16	0	54.1
TRIUMPH	TR 46	84	109	59	46	15	0	53.3
ASGROW	A406	82	108	56	50	16	1	52.8
MYCOGEN	T–E OMAHA	81	93	68	54	17	0	52.8
MYCOGEN	T–E PROSPER	79	98	59	49	16	0	51.9
CARGILL	797	79	98	59	50	17	0	52.5
CIBA	1482	76	101	50	48	15	0	54.1
-----	90M351 X TX272	70	99	40	49	16	0	53.2
DEKALB Plant Gen	DK–40Y	67	99	35	50	16	0	51.7
-----	RS626	67	80	53	50	16	1	53.6
DEKALB Plant Gen	DK–38Y	66	81	50	47	16	0	51.9
-----	MARTIN	49	79	19	51	16	0	54.0
-----	NB505	37	50	24	48	15	0	53.9
AVERAGE ALL ENTRIES		85	104	65	49	16	0.1	54.4
DIF. REQ. FOR SIG. 5%		16	5	16	9	1	NS	2.6
25%		9	3	10	2	1	NS	1.5

** Top yield within a column, * Not different than top yield within a column

Southwest Ecofallow Grain Sorghum Hybrid Tests 1989 – 1993

BRAND	HYBRID	GRAIN YIELD BU/A	PLANT HEIGHT IN	EARLY MOISTURE %	STALK LODGE %	TEST WEIGHT LB/BU
		2–YEAR AVERAGE				
NORTHRUP KING	KS 555Y	121	51	17	0	58.2
ASGROW	A504	116	52	17	0	56.4
ASGROW	Seneca	116	46	16	0	58.3
GOLDEN HARVEST	TH–388W	111	48	17	0	57.2
NORTHRUP KING	KS 524	111	48	17	0	56.2
NORTHRUP KING	KS 560Y	111	46	17	0	57.9
PIONEER	8505	110	51	17	1	58.2
PIONEER	8699	109	51	16	0	57.0
-----	N122A X TX2737	108	52	17	0	57.9
CARGILL	797	108	49	17	0	55.0
NORTHRUP KING	KS 383Y	107	44	16	1	57.2
PIONEER	8601	104	51	17	0	57.9
TRIUMPH	TR50yG	103	47	16	0	56.8
CARGILL	607E	99	46	16	0	56.8
TRIUMPH	TR 46	95	45	16	0	55.1
-----	RS626	87	51	16	1	55.9
DEKALB Plant Gen	DK–40Y	87	50	17	0	54.7
DEKALB Plant Gen	DK–38Y	85	48	17	0	54.5
-----	MARTIN	64	51	16	1	56.4
-----	NB505	45	49	16	1	56.3
AVERAGE ALL ENTRIES		100	49	16	0.2	56.7
DIF. REQ. FOR SIG.	5%	5.9	0.7	2.2	NS	0.4
	25%	3.4	0.4	1.2	NS	0.2
		3–YEAR AVERAGE				
ASGROW	A504	96	50	16	0	56.8
ASGROW	Seneca	95	45	15	2	58.1
GOLDEN HARVEST	TH–388W	93	47	15	1	57.6
NORTHRUP KING	KS 555Y	92	49	15	14	57.8
NORTHRUP KING	KS 383Y	89	42	15	1	56.9
-----	N122A X TX2737	88	49	15	6	57.6
PIONEER	8699	88	48	14	9	56.8
PIONEER	8601	84	49	15	6	57.5
TRIUMPH	TR50yG	83	45	14	12	57.0
CARGILL	607E	82	45	15	10	56.5

Continued on page 2.

Southwest Ecofallow Grain Sorghum Hybrid Tests 1989 – 1993. Page 2.

BRAND	HYBRID	GRAIN YIELD BU/A	PLANT HEIGHT IN	EARLY MOISTURE %	STALK LODGE %	TEST WEIGHT LB/BU
		3–YEAR AVERAGE (Continued)				
DEKALB Plant Gen	DK–38Y	73	45	15	0	54.9
DEKALB Plant Gen	DK–40Y	71	48	15	7	55.6
-----	RS626	71	48	15	17	55.9
-----	MARTIN	55	48	15	4	56.3
-----	NB505	39	47	15	14	57.0
AVERAGE ALL ENTRIES		80	47	15	7	56.8
DIF. REQ. FOR SIG.	5%	6.6	0.8	NS	NS	0.5
	25%	3.8	0.4	0.2	NS	0.3
		4–YEAR AVERAGE				
ASGROW	Seneca	90	44	15	2	58.9
NORTHRUP KING	KS 555Y	89	47	15	11	58.1
GOLDEN HARVEST	H–388W	87	45	15	1	57.7
ASGROW	A504	87	47	16	0	56.8
NORTHRUP KING	KS 383Y	84	40	15	1	57.2
PIONEER	8601	81	46	15	5	58.1
TRIUMPH	TR50yG	79	43	14	9	57.4
CARGILL	607E	78	43	15	8	56.4
DEKALB Plant Gen	DK–40Y	75	46	15	5	56.6
-----	RS626	73	46	15	13	56.4
-----	MARTIN	52	46	15	3	56.6
-----	NB505	39	46	15	12	57.0
AVERAGE ALL ENTRIES		76	44.8	14.8	5.6	57.3
DIF. REQ. FOR SIG.	5%	7.1	0.8	0.3	NS	0.6
	25%	4.1	0.4	0.2	NS	0.3
		5–YEAR AVERAGE				
ASGROW	Seneca	80	44	15	1	56.9
-----	RS626	68	45	15	13	54.9
-----	MARTIN	47	46	15	3	55.5
-----	NB505	41	46	15	16	56.5
AVERAGE ALL ENTRIES		59	45	15	8.4	56.0
DIF. REQ. FOR SIG.	5%	7.3	NS	NS	NS	NS
	25%	4.1	NS	NS	2.8	0.4

West Central Ecofallow Grain Sorghum Hybrid Tests
Lincoln and Perkins Counties – 1993

Brand	Hybrid	Average yield bu/a	Lincoln yield bu/a	Perkins yield bu/a	Days to bloom	Plant height inches	Grain moisture %	Stalk Lodge %	Bushel weight lb/bu
ICI SEEDS	NO643	93 **	127 **	59 *	70	52	12	0	51.4
-----	NB505	78 *	96	60 **	66	49	13	1	52.5
NORTHRUP KING	KS 555Y	70	93	46	72	52	13	1	49.4
ICI SEEDS	5616	70	103	36	72	38	13	0	50.6
NORTHRUP KING	KS 560Y	64	95	33	73	46	12	0	50.1
JACQUES	266E	61	90	31	72	47	12	0	48.2
MYCOGEN	T-E ELITE	61	87	35	70	49	13	0	48.9
CARGILL	607E	57	78	36	73	44	12	0	48.4
DEKALB Plant Gen	DK-38Y	57	82	32	72	46	12	1	46.0
-----	RS626	55	71	39	74	52	14	0	46.4
NORTHRUP KING	KS 383Y	54	89	18	74	42	11	0	48.4
ASGROW	A504	52	83	20	76	50	14	0	45.1
CIBA	1482	49	70	27	76	48	11	0	47.2
MYCOGEN	T-E HARDY	49	72	25	74	45	13	0	47.5
-----	MARTIN	46	66	25	76	47	13	0	47.6
NORTHRUP KING	KS 524	45	71	19	75	49	11	0	42.6
CARGILL	X19383	34	56	12	79	48	12	0	41.6
CARGILL	727	31	57	5	80	46	10	0	43.4
AVERAGE ALL ENTRIES		57	83	31	74	48	12.1	0.1	48.1
DIF. REQ. FOR SIG. 5%		15	17	12	2	8	NS	NS	3.7
25%		9	10	7	1	5	NS	NS	2.2

** Top yield within a column, * Not different that top yield within a column

Perkins County sorghum was not matured at first frost.

West Central Ecofallow Grain Sorghum Hybrid Tests 1990 – 1993

BRAND	HYBRID	GRAIN YIELD BU/A	PLANT BLOOM DAYS	PLANT HEIGHT IN	EARLY MOISTURE %	STALK LODGE %	BUSHEL WEIGHT LB/BU
		2-YEAR AVERAGE					
-----	NB505	75	74	49	14	0	51.1
-----	RS626	59	84	52	14	0	45.7
JACQUES	266E	58	81	47	13	0	46.9
ASGROW	A504	50	86	50	14	0	42.8
DEKALB Plant Gen	DK-38Y	46	83	46	13	0	43.4
-----	MARTIN	40	85	47	14	0	47.2
AVERAGE ALL ENTRIES		54	82	49	14	0	46.2
DIF. REQ. FOR SIG.	5%	5.6	1.3	NS	NS	NS	1.0
	25%	3.1	0.7	NS	NS	NS	0.5
		3-YEAR AVERAGE					
-----	NB505	67	74	47	13	14	51.8
-----	RS626	65	84	47	14	6	48.1
DEKALB Plant Gen	DK-38Y	53	84	43	13	1	47.1
-----	MARTIN	48	86	45	13	2	50.3
AVERAGE ALL ENTRIES		58	82	45	13	6	49.3
DIF. REQ. FOR SIG.	5%	NS	1.2	NS	NS	NS	NS
	25%	NS	0.6	NS	NS	NS	0.8
		4-YEAR AVERAGE					
-----	RS626	58	80	47	13	11	48.0
-----	NB505	55	71	46	12	29	51.4
-----	MARTIN	43	83	46	13	2	51.3
AVERAGE ALL ENTRIES		52	78	46	13	14	50.2
DIF. REQ. FOR SIG.	5%	NS	0.8	NS	NS	NS	NS
	25%	NS	0.4	NS	NS	5.2	0.7

West District Dryland Grain Sorghum Hybrid Test
Cheyenne County Black Fallow and Ecofallow – 1993

Brand	Hybrid	Average yield bu/a	Black fallo yield bu/a	Ecofallow yield bu/a	Days to bloom	Plant height inches	Grain moisture %	Bushel weight lb/bu
CARGILL	577	8 *	10	6 **	79	43	8	22.6
-----	N123A X 840089	9 **	13 *	5 *	78	39	11	31.8
DEKALB Plant Gen	DK-28E	9 **	14 **	4 *	76	37	8	25.5
-----	NB505	5 *	7	3 *	74	42	10	37.9
CARGILL	X11733	1	1	0	84	36	14	---
CARGILL	607E	0	0	0	87	39	14	---
AVERAGE ALL ENTRIES		5	8	3	78	39	10	30.8
DIF. REQ. FOR SIG. 5%		5	3	4	2	2	3	5.3
25%		3	2	2	1	1	2	2.8

** Top yield within a column, * Not different than top yield within a column

West Grain Sorghum Hybrid Tests 1990 – 1993

BRAND	HYBRID	GRAIN YIELD BU/A	PLANT BLOOM DAYS	PLANT HEIGHT IN	EARLY MOISTURE %	TEST WEIGHT LB/BU
		2–YEAR AVERAGE				
DEKALB Plant Gen	DK–28E	33	83	36	14	33.6
-----	N123A X 840089	31	84	38	15	37.3
-----	NB505	17	81	42	14	42.6
AVERAGE ALL ENTRIES		27	83	38	14	37.8
DIF. REQ. FOR SIG.	5%	NS	NS	0.6	NS	NS
	25%	NS	0.4	0.3	NS	1.2
		3–YEAR AVERAGE				
DEKALB Plant Gen	DK–28E	39	84	36	14	37.2
-----	N123A X 840089	36	85	38	15	40.9
-----	NB505	22	82	41	14	46.0
AVERAGE ALL ENTRIES		32	84	38.2	14.1	41.4
DIF. REQ. FOR SIG.	5%	NS	NS	0.5	NS	1.2
	25%	2.3	0.3	0.3	NS	0.7
		4–YEAR AVERAGE				
DEKALB Plant Gen	DK–28E	40	83	35	14	41.4
-----	NB505	24	81	41	14	48.1
AVERAGE ALL ENTRIES		32	82	38	14	44.7
DIF. REQ. FOR SIG.	5%	NS	NS	0.5	NS	NS
	25%	2.2	0.3	0.3	NS	1.1

West District Irrigated Grain Sorghum Hybrid Test
Scotts Bluff County – 1993

Brand	Hybrid	Grain yield bu/a	Plant height inches	Grain moisture %	Bushel weight lb/bu
-----	N123A X 840089	26	40	8	43.6
DEKALB Plant Gen	DK–28E	23	40	8	41.6
-----	NB505	14	45	9	48.0
AVERAGE ALL ENTRIES		21	42	8.9	45.0
DIF. REQ. FOR SIG. 5%		10	3	NS	4.1
25%		6	2	NS	2.2

Weather data for 1993 in counties where Grain Sorghum plots were located. Monthly average of daily high and low temperatures (Fahrenheit) and total monthly rainfall (inches).

Month	County								
	Lancaster			Saline			Clay		
	T–High	T–Low	Rain	T–High	T–Low	Rain	T–High	T–Low	Rain
May	71	48	---	72	49	5.4	70	48	3.7
June	79	57	6.7	80	58	7.3	79	57	6.0
July	83	64	15.4	84	64	6.7	82	64	11.3
Aug.	84	63	5.0	85	64	4.5	83	63	8.4
Sept.	72	49	4.0	73	50	5.0	72	47	1.9

Month	County								
	Red Willow			Hayes			Lincoln		
	T–High	T–Low	Rain	T–High	T–Low	Rain	T–High	T–Low	Rain
May	73	46	2.4	73	47	2.3	71	45	1.8
June	83	56	3.7	81	55	2.2	78	53	5.8
July	85	63	7.4	88	63	5.3	82	60	3.7
Aug.	84	61	1.7	84	61	5.1	78	55	4.4
Sept.	75	47	0	73	46	2.2	73	44	0.5

Month	County					
	Perkins			Cheyenne		
	T–High	T–Low	Rain	T–High	T–Low	Rain
May	76	47	3.1	72	50	3.8
June	83	54	3.2	81	60	7.1
July	86	59	7.7	81	65	7.9
Aug.	85	58	1.9	82	63	3.4
Sept.	78	45	1.1	73	50	2.2

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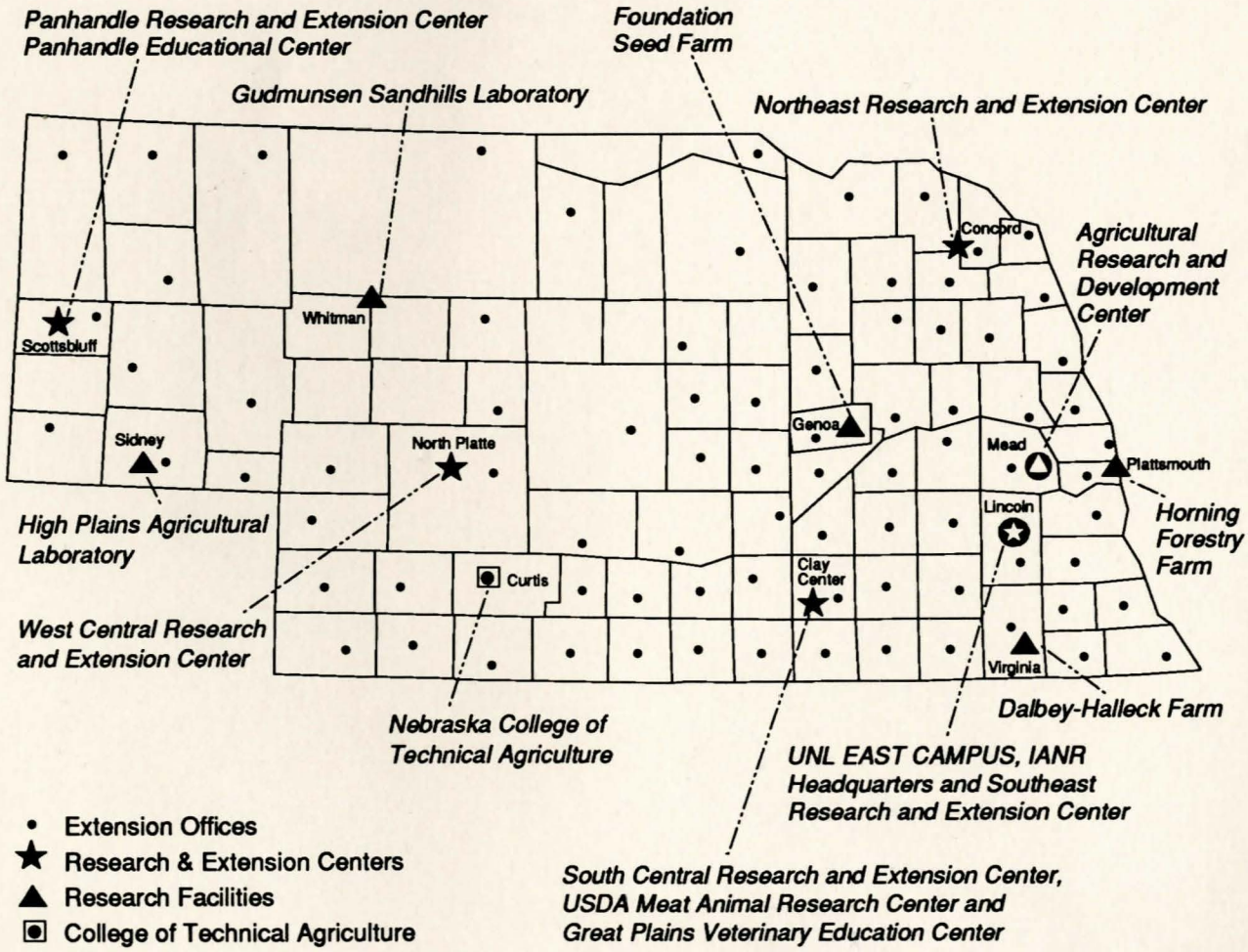

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